UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/267,199	03/12/99	BHAT	B 04983.0024.U

022930
HOWREY SIMON ARNOLD & WHITE LLP
BOX 34
1299 PENNSYLVANIA AVENUE NW
WASHINGTON DC 20004

HM12/0814

EXAMINER	
MORAN, M	
ART UNIT	**PAPER NUMBER**
1631	5

DATE MAILED: 08/14/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/267,199	Bhat et al.
Examiner	**Group Art Unit**
Marjorie Moran	1631

☒ Responsive to communication(s) filed on *Mar 12, 1999*.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *one* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-9* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☐ Claim(s) _____ is/are rejected.

☐ Claim(s) _____ is/are objected to.

☒ Claims *1-9* are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Election/Restriction

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-2, drawn to a substantially purified nucleic acid encoding a maize or soybean protein, classified in class 536, subclass 23.1.

II. Claims 3-4, drawn to a substantially purified maize or soybean tocopherol synthesis pathway enzyme, classified in class 530, subclass 300.

III. Claim 5, drawn to an isolated antibody which binds the polypeptide, classified in class 530, subclass 387.9.

IV. Claims 6-7, drawn to a transformed plant comprising a promoter, a structural nucleic acid molecule encoding a maize or soybean tocopherol synthesis pathway enzyme, and a 3' non-translated sequence, classified in class 800, subclass 205.

V. Claims 8-9, drawn to a method for determining the level or pattern in a plant cell of a tocopherol synthesis pathway enzyme, classified in class 435, subclass 15.

The inventions are distinct, each from the other because of the following reasons: Groups I and II are separate and distinct because the inventions are directed to different chemical types regarding the critical limitations therein. For Group II, the critical feature is a polypeptide whereas for Group I the critical feature is a polynucleotide. It is acknowledged that various processing steps may cause a polypeptide of group II to be directed as to its synthesis by a polynucleotide of Group I, however, the completely separate chemical types of the inventions of

Groups I and II supports the undue search burden if both were examined together. Additionally, polypeptides have been most commonly, albeit not always, separately characterized and published in the Biochemical literature, thus significantly adding to the search burden if searched together, as compared to being searched separately. Also, it is pointed out that although processing may connect two groups, such a connection does not prevent them from being viewed as distinct, because enough processing can result in producing any composition from any other composition if the processing is not so limited to additions, subtractions, enzyme actions, etc.

Inventions I and III are separate and distinct, as the claims of Invention I are drawn to polynucleotides, while the claims of group III is drawn to an antibody. These are differing biochemical entities having differing biochemical properties, structures and effects. Invention III would require searching in areas unrelated to polynucleotides, and as such, would require an undue burden on the examiner if not restricted.

Inventions I and IV are not related. The claims of Group I are drawn to polynucleotides, while the claims of Group IV are drawn to a plant. While the plant of Group IV may encode a polynucleotide of Group I, no such limitation is recited in the claims of either Group, therefore the Groups are separate and distinct.

Inventions I and V are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP

§ 806.05(h)). In the instant case the polynucleotides of Group I can be used in methods of transformation or of synthesizing proteins, therefore the groups are distinct.

Inventions II and III are separate and distinct as the polypeptides of Invention II are structurally and biochemically different than the antibodies of Invention III. While the antibody of Group III may bind to the polypeptides of Group II, the biochemical activities of each Invention are quite different, requiring differing methods and areas of search, which would impose an undue burden upon the examiner.

Inventions II and IV are unrelated. Invention II is drawn to a polypeptide; Invention IV is drawn to a plant comprising a nucleic acid sequence. The claims do not recite that the plant of Group IV express or comprise the polypeptide of Group II, nor do the claims of Group II recite that the polypeptide be expressed by or purified from a plant, therefore Group II and Group IV are separate and distinct.

Inventions II and V are not related. The claims of Group II are drawn to a polypeptide, the Claims of Group V are drawn to methods of use of a polynucleotide and do not recite any relationship to or use of the polynucleotide of Group II. Group II is therefore separate and distinct from Groups V.

Inventions III and IV are not related. The antibody of Group III has no relationship to the plant of Group IV, therefore the Groups are separate and distinct.

Invention III is not related to either of Inventions IV or V. The antibody of Group III has no relationship to the plant of Group IV; the method of Group V does not recite the antibody of

Group III, and the antibody of Group III is separate and distinct from the polynucleotides recited in the claims of Groups Iv and V, therefore Group III is separate and distinct from each of Groups IV and V.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter and as shown by their different classification, restriction for examination purposes as indicated is proper. In addition, because these inventions are distinct for the reasons given above and the search required for Groups II-V is not required for Group I, and the search for Groups I, and III-V is not required for Group II, restriction for examination purposes as indicated is proper.

Sequence Election Requirement Applicable to All Groups

In addition, each Group detailed above reads on patentably distinct sequences. Each sequence is patentably distinct because the sequences are unrelated sequences, and a further restriction is applied to each Group. For an elected Group drawn to amino acid sequences, Applicant must further elect a single amino acid sequence. For an elected Group drawn to nucleic acid sequences, Applicants are permitted to elect up to 10 nucleic acid sequences (See MPEP 803.04).

MPEP 803.04 states:
Nucleotide sequences encoding different proteins are structurally distinct chemical compounds and are unrelated to one another. These sequences are thus deemed to normally constitute independent and distinct inventions within the meaning of 35 U.S.C. 121. Absent evidence to the contrary, each such nucleotide sequence is presumed to represent an independent and distinct invention, subject to a restriction requirement pursuant to 35 U.S.C. 121 and 37 CFR 1.141 et seq. Nevertheless, to further aid the biotechnology industry in protecting its intellectual property without creating an undue burden on the Office, the Commissioner has decided sua sponte to partially waive the requirements of 37 CFR 1.141 et seq. and permit a reasonable number of such nucleotide sequences to be claimed in a single application. See Examination of Patent Applications Containing Nucleotide Sequences, 1192 O.G. 68 (November 19, 1996).
It has been determined that normally ten sequences constitute a reasonable number for examination purposes. Accordingly, in most cases, up to ten independent and distinct nucleotide sequences will be examined in a single application without restriction. In addition to the specifically selected sequences, those sequences which are patentably indistinct from the selected sequences will also be examined. Furthermore, nucleotide sequences encoding the same protein are not considered to be independent and distinct inventions and will continue to be examined together.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention, and the single amino acid or 10 nucleotide sequences to be examined even though the requirement be traversed (37 CFR 1.143). Only those sequences elected will be examined.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

Papers relating to this application may be submitted to Technology Center 1600 by facsimile transmission. The number of the fax machine for official papers in Technology Center 1600 is (703) 308-4556. Any document submitted by facsimile transmission will be considered an official communication unless the cover sheet clearly indicates that it is an informal communication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marjorie Moran whose telephone number is (703) 305-2363. The examiner can normally be reached on Monday through Friday from 7:30 a.m. to 4:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, a supervisory examiner, Michael Woodward, can be reached at (703) 308-4028. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1235.

Marjorie A. Moran
Patent Examiner
Art Unit 1631

ARDIN H. MARSCHEL
PRIMARY EXAMINER